



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,730	01/22/2001	Claudio L.K. Lins	6289	1305

22922 7590 09/09/2004

REINHART BOERNER VAN DEUREN S.C.
ATTN: LINDA GABRIEL, DOCKET COORDINATOR
1000 NORTH WATER STREET
SUITE 2100
MILWAUKEE, WI 53202

EXAMINER

CHORBAJI, MONZER R

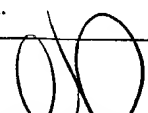
ART UNIT

PAPER NUMBER

1744

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/766,730	Applicant(s) LINS, CLAUDIO L.K.	
	Examiner MONZER R CHORBAJI	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/22/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This non-final office action is in response to the amendment received on 06/29/2004

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 13 recites the limitation "said electrode" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).
4. Claims 1-3 13, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Coffee (U.S.P.N. 6,105,877).

With respect to claims 1 and 15, the ('877) reference discloses a substantially non-aqueous (col.9, lines 61-63) electrostatically dispensable disinfectant composition (20, 23 and 24) that includes an alcohol solvent component and a glycol solute component (col.9, lines 61-63).

With respect to claim 2, the ('877) reference uses ethanol as the alcohol solvent (col.9, line 62).

With respect to claims 3 and 17, the ('877) reference uses a conductivity control component (col.4, lines 49-50) having a conductivity of about 0.01 microsiemens per centimeter to about 1.0 microsiemens per centimeter (col.4, lines 32-33). Note that the ('877) reference discloses the unit of resistivity as ohmmeter, which is the same as ohm or ohms. The units of ohm and microsiemens are related through reciprocal relation. For example, $0.1 \text{ microsiemens/cm} = 10 \text{ mega ohm-cm}$, which falls within the range disclosed in the reference.

With respect to claim 13, the ('877) reference teaches a system for electrostatic delivery of an antimicrobial material (figure 9) that includes the following: a disinfectant composition that is electrostatically dispensable (figure 9) including a glycol component (col.9, lines 61-63), an alcohol component (col.9, lines 61-63) and a conductivity control component (col.4, lines 49-50), an electrostatic dispensing apparatus (figure 9) that includes a charging element for charging the composition (24), a voltage source (23) and a dispenser (unlabeled nozzle of 24) for dispensing the charged composition at a rate (col.2, lines 44-49).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffee (U.S.P.N. 6,105,877) in view of Schroeder et al (U.S.P.N. 5,591,395).

With respect to claims 4-8, Coffee teaches the following: the conductivity control component is perfume (col.4, lines 49-50), 80% ethanol such that if ethanol is volume percent not weight percent then 80% would still fall within the range of claim 7 (col.9, line 62) and a viscosity range of 1 to 500 centipoise (col.4, lines 30-31) for the composition provided by the amount of ethanol present. However, the ('877) reference fails to disclose weight percent value for the fragrance and the use of triethylene glycol. The ('395) reference, which is in the art of disinfecting air, teaches the use of fragrance at 10% weight (example 1) and the use of 10% weight of triethylene glycol (example 2). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to specifically choose triethylene glycol since it is one of the

preferred glycol materials named by the ('395) reference (col.1, lines 66-67) for its ability to readily generate particles, which form an aerosol suspension in the air at temperatures, which can safely be used in a small consumer appliance (col.1, lines 62-66).

8. Claims 9-10 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffee (U.S.P.N. 6,105,877) in view of Schroeder et al (U.S.P.N. 5,591,395) and further in view of Tsuchiya et al (U.S.P.N. 4,083,954) and Bloch (U.S.P.N. 4,071,616).

With respect to claims 9 and 22, the ('877) reference teaches a substantially non-aqueous electrostatically dispensable (20, 23 and 24) disinfectant composition (col.9, lines 62-63) that includes a glycol component with intrinsic initial viscosity and initial conductivity, an alcohol component and a conductivity component (col.4, lines 49-50) having a resistivity range, that falls within the range for the conductivity recited (see explanation with respect to claim 3). Further, the ('877) reference discloses a delivery rate range from 0.1 micro Liter to 500 micro Liter (col.2, lines 45-48) such that upon conversion to grams per hour, the reference delivery rate range values were found to fall within the recited delivery range values. However, with respect to claims 9 and 22, the ('877) reference fails to provide weight percentage values that fall within the recited ranges for the glycol, the alcohol and the conductivity control components. The ('395) reference discloses that triethylene glycol can be in the amount of 10% by weight (example 2), but fails to teach weight percentage values for the alcohol and the conductivity control components. Thus, it would have been obvious to one having

Art Unit: 1744

ordinary skill in the art at the time the invention was made to specifically choose triethylene glycol since it is one of the preferred glycol materials named by the ('395) reference (col.1, lines 66-67) for its ability to readily generate particles, which form an aerosol suspension in the air at temperatures, which can safely be used in a small consumer appliance (col.1, lines 62-66).

The ('954) reference, which is in the art of designing aerosol compositions, teaches that the weight percent of ethanol is 50% (example 1), but fails to disclose weight percentage values for the conductivity control component. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the ('877) reference by increasing the amount of ethanol in order to provide an excellent emulsion state between the base and propellant as taught by the ('954) reference (col.1, lines 65-68 and col.2, lines 1-6).

The ('616) reference, which is in the art of designing air fresheners, teaches that the weight percent range for perfume is from 0.25% to 30% (col.1, lines 61-62). As a result, it would have been obvious to one having ordinary skill in the art at the time invention was made to increase the amount of perfume present in order to release the perfume with a sufficient level so as to be considered satisfactory air freshener as taught by the ('616) reference (col.3, lines 50-52).

The limitations of claims 10 and 23 have been addressed above with respect to claims 9 and 22. However, with respect to claim 24, the ('395) reference teaches that the weight percent range for triethylene glycol is from 5% to 100% (col.2, lines 15-19). In addition, the ('954) reference teaches that the percent weight of ethanol can be 50%

or 60% or even 70% of the aerosol composition such that the weight percent for ethanol recited in claim 24 is within the teaching scope of the reference.

9. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffee (U.S.P.N. 6,105,877) in view of Schroeder et al (U.S.P.N. 5,591,395) and further in view of Tsuchiya et al (U.S.P.N. 4,083,954), Bloch (U.S.P.N. 4,071,616) and Peltier (U.S.P.N. 5,382,410).

With respect to claim 11-12, the ('877) reference, the ('395) reference, the ('954) reference and the ('616) reference all fail to teach the use of essential oils. However, with respect to claims 11-12, the ('410) reference, which is in the art of electrostatically generating aerosols, teaches the use of essential oils (col.1, lines 45-48). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of the ('877) reference by substituting perfumes for essential oils since essential oils are known for odorizing air as taught by the ('410) reference (col.10, lines 42-45).

10. Claims 14, 16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffee (U.S.P.N. 6,105,877) in view of Schroeder et al (U.S.P.N. 5,591,395).

With respect to claim 18, the ('877) reference teaches a method of using a glycol to reduce airborne microbial levels (col.4, lines 13-14, the use of biocide at some level would reduce airborne microbial levels regardless of the intended use) that includes the following: providing an electrostatically dispensable composition (figure 9) including a glycol component (col.9, lines 61-63), charging element for charging the composition

(24) including an electrode (unlabeled connector between 23 and 24 in figure 9) connected to a voltage source (23) and a dispenser (unlabeled nozzle of 24) for dispensing the charged composition at a rate (col.2, lines 44-49). However, the ('877) reference fails to teach effecting a 3-log reduction in airborne microbial levels. The ('395) reference teaches that the composition causes a reduction of 3-log in the airborne microbial levels (Examples 1-2). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ('877) reference by choosing triethylene glycol since it causes a substantial reduction in the amount of airborne bacteria present as taught by the ('395) reference (col.4, lines 10-17).

The limitations of claims 14, 16 and 19-20 have previously been addressed in claim 18.

With respect to claim 21, the ('877) reference discloses the use of a conductivity control component (col.4, lines 49-50) and for providing a conductivity of about 0.01 microsiemens per centimeter to about 1.0 microsiemens per centimeter as have previously been explained regarding claims 3 and 17.

Response to Arguments

11. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Remarks

12. The double patenting rejections in the office action dated 03/16/2004 have been withdrawn.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monzer R. Chorbaji *MRC*
Patent Examiner
AU 1744
09/06/2004

Robert J. Warden, Sr.
ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700